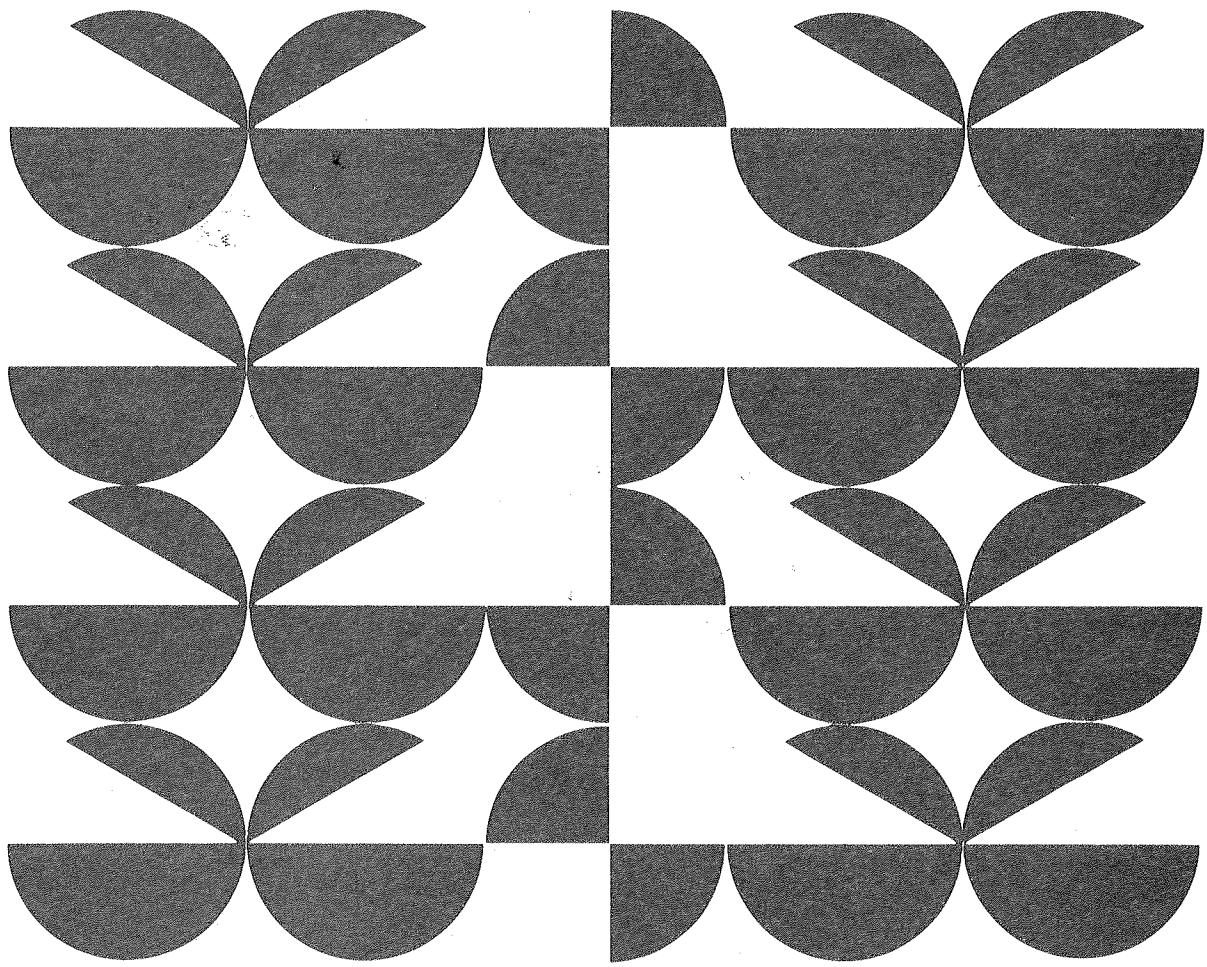
A.I.D. Discussion Paper No. 39

Growth, Poverty Alleviation, and Foreign Assistance



August 1981

Agency for International Development
Washington, D.C. 20523

GROWTH, POVERTY ALLEVIATION AND FOREIGN ASSISTANCE*

by

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August 1981

* I would like to thank Constantine Michalopoulos, Jerry Wolgin, Danny Leipziger, and Gordon Donald for their extensive, helpful comments, without attributing to them responsibility for the views expressed. An earlier version of this paper appeared in Basic Needs and Development, Copyright 1981 by Oelgeschlager, Gunn, and Hain, Publishers, Inc. Reprinted with permission.

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Introduction

Most of the literature on basic human needs is motivated by the observation that rapid growth in less developed countries (LDCs) has failed to make a substantial impact in terms of alleviation of poverty and enhanced satisfaction of basic needs.[1/] This failure of growth has typically been attributed to patterns of growth within countries, which allegedly have generated a worsened distribution of income, little or no increase in absolute incomes of the poor, and a pattern of production and supply ill-suited to the task of meeting basic needs. The basic needs literature has placed great emphasis on achieving patterns of development that provide for "equitable growth" (through increased and more productive employment, asset redistribution, and other measures leading to a more equitable distribution of earned income) and enhanced development of human resources (through more effective direct intervention to address health, education and nutritional needs.) [2/]

1/ Conceptually, one can define the poor as those who cannot meet their basic needs, so that poverty alleviation and increased satisfaction to basic needs are equivalent. Empirically, estimates of poverty tend to focus on the capacity to meet needs for goods such as food, clothing and shelter that are typically available through markets. They usually ignore the costs of needs such as health, education, and clean water, which might or might not be available through functioning markets.

2/ Some characterize this latter endeavor -- human resource development -- as THE basic needs approach, and regard it as complementary to (but distinct from) efforts toward achieving equitable growth. For example, see Paul Streeten (1977). Others consider that the basic needs approach is primarily an equitable growth strategy, modified to include supply-side considerations of the composition of output, including the provision of public services. See ILO (1977), Crosswell (1978).

The main thesis of this paper is that the persistence of widespread absolute poverty despite rapid growth of GNP in LDCs as a group results not so much from inadequate patterns of growth within countries as from the uneven patterns of growth among countries. Most of the world's poor are in low-income countries, and these countries have by and large experienced very slow rates of growth. Further, what data exist on trends in income distribution over time reveal no predominant tendency for income distribution to worsen with growth. Where rapid growth has occurred, it has almost always resulted in reduced incidence of poverty.

This certainly does not mean that the current emphasis on basic human needs is misplaced. No more urgent priority faces the development community than the pressing need to alleviate world poverty. Nor does it imply that intra-country patterns of growth are unimportant. The sorts of measures highlighted by the basic needs approach vitally affect the extent of poverty associated with a given level of per capita income, and arguably contribute to steady growth in income over time through investment in human resources, better utilization of existing resources, etc.[1/]

It does point to a dimension of the basic needs problem that has been relatively neglected, particularly by donors. For it

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1/ See Crosswell (1978) for a discussion of these arguments. See Wheeler (1980) and Hicks (1980) for empirical evidence.

turns out that while most of the developing world's poverty problem is heavily concentrated in low-income countries -- those with 1977 per capita incomes at or below $300 -- concessional foreign assistance (not to mention non-concessional foreign assistance) is directed primarily toward middle-income countries.

The first section of this paper takes as a point of departure the estimates of incidence of poverty for thirty-six developing countries derived by Ahluwalia, Carter and Chenery (1979) and uses these as a basis for estimating the percentages of population in absolute poverty for sixty-eight other developing countries. This facilitates an analysis of the distribution of poverty among groups of countries, classified according to per capita income. The main findings are that over 80 percent of the world's poor are in low-income countries -- those with per capita incomes in 1977 at or below $300 (1977 prices). About half of the population in this group is poor. Countries with per capita incomes above $450 account for less than 10 percent of LDC poor, and the incidence of poverty in this group is fairly low, about 14 percent.

The next section of the paper critically examines the proposition that rapid growth has failed to make a substantial impact on absolute poverty because of adverse trends in income distribution as growth proceeds. While cross-section data lend some support to this latter proposition, time-series data do not. Further, simulations that incorporate an assumption of worsening

income distribution for low-income countries nonetheless show a substantial impact of growth in terms of reduced incidence of poverty. Finally, empirical studies of a number of developing countries suggest that rapid growth has typically been associated with reductions in absolute poverty.

The third section of the paper draws implications for donors of concessional foreign assistance. An examination of the distribution of Official Development Assistance (ODA) among groups of countries, using data on commitments over the 1976-78 period, reveals that the low-income countries -- with over 80 percent of LDC poor and over 60 percent of the total LDC population -- received less than 45 percent of ODA commitments. In contrast the group of countries with per capita incomes above $450 -- which account for less than 10 percent of the poor and about one-quarter of the total population -- received over 35 percent of ODA commitments. Thus the distribution of concessional foreign assistance does not reflect very well the distribution of LDC poverty. The ensuing discussion reviews the literature on determinants of aid allocation patterns, pointing to biases in aid allocations in favor of small countries (as opposed to populous countries) and in favor of middle-income countries (as opposed to low-income countries). Econometric analysis of the recent ODA commitments data under investigation here confirms a very sharp bias in favor of small countries, but does not indicate a bias toward middle-income countries. The former bias tends to skew assistance away from the low-income group, since these

countries are on average more populous. These results lead to a discussion of allocation models that donors might use to effect a redistribution of ODA along patterns that would be more consistent with the objective of achieving substantial reductions in LDC poverty by the end of the century. The common features of these models include a softening or elimination of the bias against large countries; an explicit bias in favor of low-income countries; and inclusion of performance or effectiveness criteria as one determinant of allocations.

What are the prospects that increased ODA flows to low-income countries would result in accelerated growth? The final section of the paper reviews some of the evidence on the relationship between foreign assistance and growth. Although this evidence is mixed, it suggests that shortfalls in foreign assistance played a significant role in the poor growth performance of the low-income group in the past, and that increased foreign assistance to low-income countries could make a substantial contribution to a more rapid growth over the next ten to twenty years. Finally, an "illustrative scenario" of a substantial shift in allocations of ODA towards low-income countries is discussed.

I. The Distribution of Poverty Among Countries

A. Established Estimates for Thirty-six Developing Countries

The methodology used here for determining the distribution of poverty among countries is based on, and extends, the work of Ahluwalia, Carter and Chenery. They in turn used as a point of departure estimates of real GDP per capita published by Kravis, Heston, and Summers (KHS). 1/ The KHS paper is motivated by the observation that the purchasing power of a dollar (the "real" value of a dollar) varies considerably from country to country at any given point in time. Accordingly, a comparison between two countries in terms of per capita income measured in dollars using conventional exchange rates ("nominal" per capita income) does not give an accurate picture of one country's average real income relative to another's.

The KHS estimates of real GDP per capita represent an effort to measure disparities in real income with greater accuracy, by estimating a factor (called an exchange rate deviation index by KHS, and referred to elsewhere as a Kravis factor) that measures the extent to which nominal comparisons with income in the United States misstate real comparisons. For instance, the observed

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1/ See "Growth and Poverty in Developing Countries" by Montek Ahluwalia, Nicholas Carter and Hollis Chenery, Journal of Development Economics, Vol. 6, No. 3, September 1979 and "Real GDP Per Capita For More Than One Hundred Countries," by Irving Kravis, Alan Heston and Robert Summers, The Economic Journal, Vol. 88, No. 350, June 1978.

Kravis factor for India is 3.34, indicating (roughly) that a dollar in India in 1970 could purchase the equivalent of $3.34 in the United States in the same year.

The Kravis estimates were derived by (1) establishing detailed series of price comparisons for sixteen countries including the United States; (2) using these price comparisons to establish real levels of per capita income (i.e., per capita income in dollars of uniform purchasing power); (3) deriving the associated Kravis factors, measured as the ratio of real to nominal per capita income; and (4) seeking readily observable variables which would econometrically explain the real income levels, and thus could be used to estimate real incomes and Kravis factors for other countries.

Ahluwalia, Carter and Chenery (ACC) used these results in estimating percentages of population in absolute poverty for thirty-six developing countries. They started with 1970 per capita GDP figures in nominal terms (i.e., measured in 1970 dollars on the basis of conventional foreign exchange rates) and converted these to dollars of uniform purchasing power (ICP dollars) using the Kravis factors estimated by KHS. Thus, for Indonesia, real per capita GDP (in ICP dollars) was roughly three times the level of nominal GDP per capita, corresponding to the econometrically estimated Kravis factor for Indonesia of 3.10.

ACC then posit a poverty line of 200 ICP dollars, which is about the income level of the 46th percentile of income recipients

in India. This income level would be approximately adequate to ensure a daily supply of 2250 calories in India. Thus, as ACC point out, the poverty line used for their estimates is essentially a South Asian standard, which is conservative in the sense of yielding estimates that understate the extent of the poverty problem by standards appropriate for more affluent developing countries. The poverty line also underestimates the per capita expenditure required to meet basic needs, including those for health and education. At the same time, it has the virtue of indicating the most acute poverty, which arguably is of greatest concern.

Given this poverty line and the estimates of real per capita income (in ICP dollars), ACC use information on income distribution to estimate the percentage of population in absolute poverty for the other thirty-five developing countries. Their sample size was limited by availability of income distribution data, indeed in eleven cases they had to estimate income distribution based on cross-country comparisons. 1/ However, the sample is fairly comprehensive in that it accounts for about 80 percent of developing country populations (excluding China). The ACC

1/ More specifically, estimates of income distribution were based on Ahluwalia's estimates of the "Kuznets Curve," i.e., the U-shaped curve that depicts the tendency for income distribution to worsen and then to improve as GNP rises. See "Inequality, Poverty and Development," Journal of Development Economics, Vol. 3, September 1976.

estimates of poverty incidence using purchasing power adjustments are given in the fifth column of Table I, along with their estimates based on official exchange rates.

B. Estimates For Other Developing Countries

The task here is to estimate the incidence of poverty for some sixty-eight other countries. Since one objective is to consider the scope for reallocation of ODA (Official Development Assistance), the sample excludes countries which received less than $25 million in ODA commitments as an annual average over the 1976-78 period. 1/ The basis for the estimates is the following equation, which was estimated using the ACC results given in Table I. 2/

$$(1) \quad PPK = 75.70 - .094(PCIK) + .000030\ (PCIK)^2$$
$$(18.58) \quad (-10.32) \qquad (7.33) \qquad R^2 = .85$$

This equation indicates that most of the variation in percentages of population in absolute poverty (PPK) as estimated by ACC can be explained by levels of per capita income adjusted for purchasing power (PCIK). The missing information, of course, is the distribution of income. Surprisingly, including a single variable to represent income distribution -- the estimated share of the lowest 40 percent of income recipients (YD) as reported by ACC -- improves the explanatory power of the equation only

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1/ Of the countries listed as low-income or middle-income in the World Development Report 1979, this criterion excludes Bhutan, Kampuchea, Rhodesia (Zimbabwe), South Africa, Uruguay, Iraq,Yugoslavia, Trinidad and Tobago, Hong Kong, Venezuela, Singapore, and Spain.

2/ T values in parentheses; all coefficients significant at the .001 level.

Table I 1/
Estimates of Incidence of Poverty

Country	1975 Per Capita Income Official Exchange Rates -1970 Prices (PCI)	1975 Per Capita Income ICP Dollars (PCIK)	Income Share Of Lowest Forty Percent	Percentage of Population in Absolute Poverty Official Exchange Rates (PP)	Percentage of Population in Absolute Poverty ICP Dollars (PPK)
Bangladesh	72	200	20.1	60	64
Ethiopia*	81	213	16.8	62	68
Burma*	88	237	15.7	56	65
Indonesia	90	280	16.1	62	59
India	102	300	17.0	46	46
Zaire*	105	281	14.6	49	53
Sudan*	112	281	14.5	47	54
Uganda*	115	280	14.4	45	55
Tanzania*	118	297	14.3	46	51
Pakistan	121	299	16.5	34	43
Kenya	168	413	8.9	48	55
Nigeria*	176	433	13.0	27	35
Philippines	182	469	11.6	29	33
Sri Lanka	185	471	19.3	10	14
Senegal	227	550	9.6	29	35
Thailand	237	584	11.5	23	32
Egypt	238	561	13.9	14	20
Ghana*	255	628	11.2	19	25
Morocco*	266	643	13.3	16	26
Ivory Coast	325	695	10.4	14	25
Korea	325	797	16.9	6	8
Colombia	352	851	9.9	14	19
Zambia	363	798	13.0	7	10
Turkey	379	914	9.3	11	14
Chile	386	798	13.1	9	11
Tunisia	425	992	11.1	9	10
Malaysia	471	1,006	11.1	8	12
Guatemala*	497	1,128	11.3	9	10
Taiwan	499	1,075	22.3	4	5
Peru	503	1,183	7.3	15	18
Brazil	509	1,136	9.1	8	15
Iran*	572	1,257	8.2	8	13
Mexico	758	1,429	8.2	10	14
Yugoslavia	828	1,701	18.8	4	5
Argentina	1,097	2,094	15.1	3	5
Venezuela	1,288	2,286	8.5	5	9

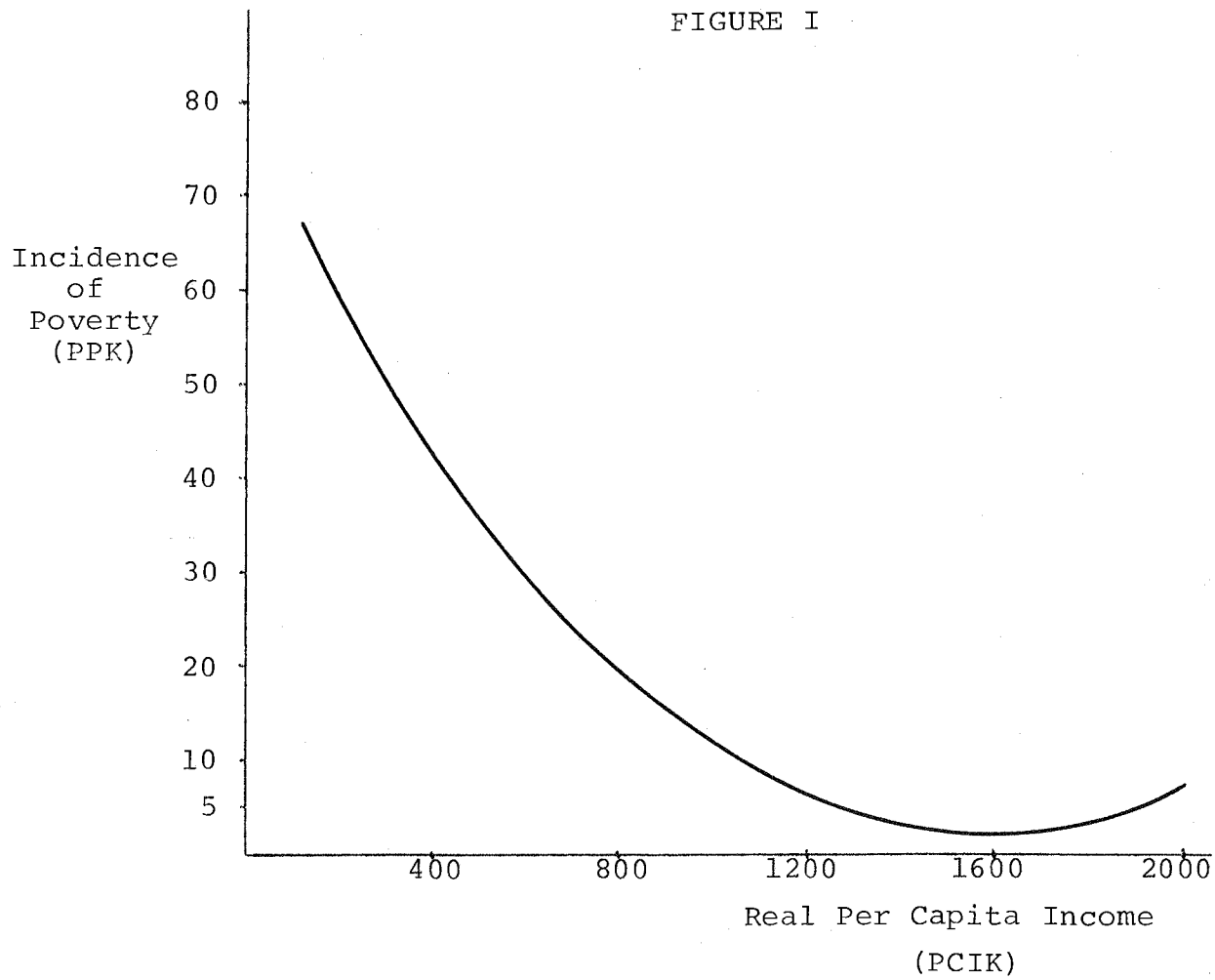
1/ From data contained in Ahluwalia, Carter and Chenery, page 303, Table 1, and page 312, Table 2.
* Income distribution based on cross-country comparisons.

slightly (R^2 = .87), and alters the value of each of the other coefficients by only about 8 percent. 1/ In the absence of reliable information on income distribution for the sixty-eight countries under consideration, equation (1) was judged to provide a useful basis for estimating percentages of population in absolute poverty for those countries.

The inclusion of the squared term allows for the possibility that the effect of increases in real per capita income on the incidence of poverty becomes weaker as the percentage of the population in poverty declines. This makes sense considering that an increase of $100 in per capita income will tend to have a major effect on poverty in a country such as Ethiopia, where real income is low (213 ICP dollars) and over two-thirds of the people are poor. The same increase in a country like Taiwan (real income of 1075 ICP dollars and only 5 percent of the population in poverty) will have a much smaller absolute impact on the incidence of poverty, measured as a percentage of the total population. Indeed, the estimated coefficients call for the incidence of poverty to decline to a minimum of about 2 percent at a real income level of around 1567 ICP dollars (somewhat less than the figures for Cyprus or Portugal) and then to rise. (See Figure I).

1/ $$PPK = 90.54 - .101\ (PCIK) + .000032\ (PCIK)^2 - .858\ YD$$
$$(11.60) \quad (-10.95) \quad (8.04) \quad (-2.19) \quad R^2 = .87$$

FIGURE I


Incidence of Poverty (PPK)
80
70
60
50
40
30
20
10
5
400
800
1200
1600
2000
Real Per Capita Income (PCIK)

Since such a pattern of increasing incidence of absolute poverty at higher income levels does not appear plausible, a value of 5 percent was imposed on the estimates for countries with per capita income above 1,250 ICP dollars. The figure of 5 percent represents the minimum value observed in the ACC sample (for Taiwan, Yugoslavia and Argentina). This adjustment affected seventeen countries in the sample, with incomes at or above the level of Panama and Costa Rica. These countries had an aggregate population of only 30 million, about 1.5 percent of the total.

The figures for per capita income adjusted for purchasing power were those provided by KHS, updated to 1975 using trend growth rates of per capita GDP as reported in the World Development Report 1979. 1/ The results of the estimates for individual countries are given in the Annex Table. For the countries included in the ACC study, the estimates of incidence of poverty and real per capita income are those reported by ACC, and therefore reflect available information on income distribution.

C. The Distribution of Poverty Among Countries

The estimates contained in the Annex Table permit an analysis of the distribution of poverty among countries. Table II presents data on groups of countries determined by 1977 Per Capita GNP; the incidence of poverty within each income group; and the portion of total poverty accounted for by each group.

1/ For Cape Verde, Vietnam, Djibouti, and French Guiana, the values for PCIK were "guesstimated" on the basis of information on nominal per capita income. For several small countries, trend growth rates were taken from the 1979 World Bank Atlas.

Table II

The Distribution of Poverty Among Country Groups

Country Group (1977 Per Capita	1977 Population (millions)	% Poor	Poor Population (millions)	Percent of Total Poor	Cumulative Percent of Total Poor
Less than $150 (14 countries)	219.1	62	135.8	17.4	17.4
India - $150 (1 country)	631.7	46	290.6	37.2	54.6
$150 - $300 (24 countries)	401.3	51	203.6	26.1	80.7
$301 - $450 (13 countries)	245.9	31	76.6	9.8	90.5
$451 - $1200 (28 countries)	326.4	15	49.0	6.2	96.7
$1201 - $4800 (22 countries)	208.5	12	24.9	3.2	99.9
Total (102 countries)	2032.9	38	780.6	99.9	99.9

1/ Source - Annex Table. Country groupings are based on 1977 per capita GNP figures from the World Development Report 1979, or in a few cases from the 1979 World Bank Atlas. Population figures are from the 1979 World Bank Atlas.

Perhaps the most striking result of this grouping of countries is the high concentration of total poverty in the poorer countries of the sample. About one-half of the countries in the sample have per capita incomes at or below $450; collectively they account for over 90 percent of total poverty in the sample. The bulk of this poverty is in countries with per capita income at or below $300, and a sizable portion is in India alone. This concentration of LDC poverty reflects not only low average levels of income, but also the concentration of total population in the low-income group. Countries with per capita incomes at or below $450 account for almost three-quarters of the total population under consideration, while countries at or below $300 comprise over 60 percent of the total.

A second important feature of the data is the fairly steady decline in incidence of poverty as per capita income increases. While this trend appears to decelerate sharply for countries in the highest income group, the results for this group are dominated by the ACC estimates for Brazil and Iran, which account for over 70 percent of the group population. It can be argued that these countries have followed a relatively inequitable pattern of development, and so are not representative.

Finally, it is worth noting that these estimates are in very close agreement with those reported in the World

Development Report 1978, which was based on an earlier version of the ACC Study. 1/ For comparable groupings based on a 1977 per capita income cutoff of $300, the two sets of estimates are compared in Table III.

Table III

A Comparison Of Estimates Of Poverty

	Total Population	Poor Population	Incidence Of Poverty
Low-Income Group			
WDR 1978	1215	630	52
Table II	1252	630	50
Middle-Income Group			
WDR 1978	895	140	16
Table II	781	151	19
Total			
WDR 1978	2110	770	36.5
Table II	2033	781	38.4

1/ Ahluwalia, Carter and Chenery, "Growth and Poverty in Developing Countries," Background Paper No. 6, World Development Report 1978, September 1978. The data and estimates in this paper were revised substantially in later versions.

II. Growth and Poverty Alleviation

Much of the discussion of basic needs has been motivated by a perception that economic growth has failed -- that significant increases in GNP have not resulted in substantial reductions in world poverty. For instance, the introduction to the ILO volume, Employment, Growth, and Basic Needs, observed that "... policy has led to rapid and sustained growth in national output and investment in both developed and developing countries. However, it has become increasingly evident, particularly from the experience of the developing countries, that rapid growth at the national levels does not automatically reduce poverty...." The IBRD/Sussex volume, Redistribution With Growth, was introduced with the statement that "It is now clear that more than a decade of rapid growth in underdeveloped countries has been of little or no benefit to perhaps a third of their population." 1/

In part, this view stems from the aggregate data on LDC performance, which demonstrates rapid growth in LDCs as a group but only slow progress in reducing poverty. For instance, between 1960 and 1976, per capita GNP in developing countries grew at an average annual rate of 3.7 percent. 2/ At the same time there

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1/ See International Labour Office, Employment, Growth and Basic Needs: A One-World Problem, Geneva 1976 (p. 15) and Chenery and Associates Redistribution With Growth, Oxford University Press, 1974, p. iii.

2/ World Bank Annual Report 1978, Statistical Annex, Table 1, p. 118.

was little perceived progress in terms of poverty alleviation. The ILO estimates that between 1963 and 1972 the number of "Seriously Poor" in LDCs increased from 1.1 to 1.2 billion, and the incidence of poverty fell only slightly, from 73 percent of LDC populations to 67 percent. 1/

The bulk of the analysis of the evident failure of LDC growth to alleviate LDC poverty has attributed this failure mainly to patterns of growth within countries. These patterns indicate a tendency for the distribution of income to worsen, so that the impact on the poor has been at best weakly positive. 2/

In the process of focusing on growth patterns within countries, there has been relative neglect until recently of the pattern of growth among countries as perhaps the key factor underlying the slow pace of poverty alleviation. Yet data on growth rates of per capita income for LDCs grouped by income level, in conjunction with the estimates of the distribution of LDC poverty presented earlier, suggest that arguments about the failure of rapid growth to alleviate poverty need to be carefully worded. Table IV indicates that in the group of countries where most of the world's poor subsist -- the low-income countries -- growth has on average been very slow. Hence the persistence of poverty cannot readily be attributed to failure of "trickle-down" mechanisms. Less than 1 percent average annual growth at a per capita income level

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1/ ILO, op. cit., pp 22-23
2/ See Redistribution With Growth, op. cit., particularly the introduction and first chapter.

of $170 could hardly produce a discernible trickle in any direction.

In contrast, middle-income countries, where both the incidence and numbers of poor are relatively low, have been growing rapidly. If anything, these data point to the success rather than failure of rapid growth in alleviating poverty.[1/] Expressed somewhat differently, rapid growth appears to have failed mainly in the sense that rapid growth in Korea and Taiwan has not had much effect on poverty in Bangladesh or Ethiopia .

Table IV

Growth and Poverty

Country Group	Per Capita Income Level ($)	Incidence of Poverty (%)	Share of LDC Poverty (%)	Average Annual Per Capita GDP Growth (%)	
				1960-70	1970-77
Low-income	170	50	81	1.5	0.9
Middle-income	1,140	19	19	3.7	3.5

SOURCE: Table III for data on poverty; World Development Report 1979 for data on income levels and growth rates. "Low income" refers to countries at or below $300 (1977 prices). Averages are weighted averages.

The next table focuses on the growth performance of individual low-income countries, to see whether the picture for low-income countries as a group holds up under further disaggregation. The last column, which gives average annual real growth in per capita

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1/ Obviously, data on variations in the incidence of poverty over time (rather than across countries) would be needed to nail this argument down. A review of some evidence in this respect is presented in the next pages.

GDP for the 1960-77 period, indicates that not a single low-income country experienced growth over that period as rapid as the average rate for middle-income countries. Two-thirds of the thirty-two countries grew at rates below 2 percent.

Table V
Growth Performance of Low-Income Countries

Country	Per Capita Income ($) 1977	Average Annual Real Growth - GDP/Capita 1960-70	1970-77	1960-77
Bangladesh	90	0.7	-0.2	0.3
Ethiopia	110	2.0	-0.1	1.1
Mali	110	0.9	1.0	0.9
Nepal	110	0.5	0.6	0.5
Somalia	110	-1.4	-1.1	-1.3
Burundi	130	2.1	-0.6	1.0
Chad	130	-1.4	-1.4	-1.4
Rwanda	130	0.1	1.0	0.5
Upper Volta	130	1.4	1.7	1.5
Zaire	130	1.6	-0.8	0.6
Burma	140	0.4	1.5	0.9
Malawi	140	2.2	3.2	2.6
India	150	1.3	0.9	1.1
Mozambique	150	2.4	-7.5	-1.8
Niger	160	-0.6	-1.0	-0.8
Afghanistan	190	-0.2	2.3	0.8
Pakistan	190	3.9	0.5	2.5
Sierra Leone	190	2.0	-0.6	0.9
Tanzania	190	3.3	1.5	2.6
Benin	200	0.0	-0.9	-0.4
Sri Lanka	200	2.2	1.4	1.9
Guinea	220	0.3	2.3	1.1
Haiti	230	-1.4	2.1	0.0
Lesotho	240	2.3	2.8	2.5
Madagascar	240	0.7	-2.2	-0.5
Cent. African Empire	240	-1.0	-2.8	-1.7
Kenya	270	2.6	2.4	2.5
Mauritania	270	na	-0.4	na
Uganda	270	2.2	-2.9	0.1
Sudan	290	-1.0	2.4	0.4
Indonesia	300	1.3	5.9	3.2
Togo	300	5.6	0.4	3.4

SOURCE: World Development Report 1979, Tables 1, 2, 17

What changes in income distribution can one reasonably expect to accompany growth? Ahluwalia's investigation of the "Kuznets Curve" suggests that the share of the lowest 40 percent tends to decline sharply as per capita income rises over the range of incomes that are of interest here. 1/ However, as the author points out, the explanatory power of the estimated equation for his sample of forty developing countries is relatively limited; the equation explains only about a quarter of the observed variation in the share of the lowest 40 percent. This suggests substantial scope for other factors to influence this share, and counteract or even reverse the tendency to decline. Indeed, much of the discussion of the basic needs approach is explicitly directed towards identifying patterns of growth that provide for an improved distribution of income.

Ahluwalia's estimates have been criticized for their extensive reliance on cross-country observations. 2/ Emerging evidence on trends in income distribution over time (rather than across countries) casts doubt on the proposition that distribution tends to worsen with growth in per capita income up to a point, and then

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1/ M.S. Ahluwalia, "Inequality, Poverty and Development," op cit. pp 301-313. The data on income shares in Table I confirm this trend however, for the low-income group, nine of these observations are based on the Kuznets Curve rather than on actual income-distribution data.

2/ For instance, G.F. Papanek, "Economic Growth, Income Distribution, and the Political Process in Less Developed Countries," in Zvi Griliches et al, Income Distribution and Economic Inequality, Campus Verlag , Frankfurt a/M, 1978.

to improve. Gary Fields has investigated the experience of thirteen countries for which data on changes in income distribution over time appear to be reliable. His findings indicate that inequality rose in seven countries (Argentina, Bangladesh, Brazil, El Salvador, Mexico, the Philippines and Puerto Rico) but declined in five (Costa Rica, Pakistan, Singapore, Sri Lanka and Taiwan) and "probably" declined in India as well. Based on this thirteen-country sample, Fields concludes that "No general relationship has thus far been encountered between changing inequality on the one hand and initial level of inequality, level of GNP or rate of growth on the other."[1/]

The study by Ahluwalia, Carter, and Chenery also contains time series data on income distribution, for a group of twelve countries.[2/] Their sample overlaps only partially with that of Fields. The authors present data on changes in the income share of the lowest 60 percent, whereas Fields relies mainly on the Gini coefficient for gauging the direction of change in income distribution. The ACC data indicate that in four countries there were substantial improvements in this share (Sri Lanka, Costa Rica, Colombia and Turkey); in five countries the share changed very little (negligible changes in Yugoslavia, the Philippines, and

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1/ Gary Fields, "Poverty, Inequality and Development: A Distributional Approach". Paper delivered at the American Economic Association Meetings, December 1979, p. 15. This paper summarized the analysis in Poverty, Inequality and Development, New York: Cambridge University Press, 1980.

2/ Ahluwalia, Carter and Chenery op. cit., p. 322.

Peru; a slight improvement in Taiwan and a slight decline in Korea); and in three countries there was a significant decline (India, Mexico, and Brazil).

Table VI combines the results of the two sets of data and facilitates a comparison with trends predicted by the Kuznets Curve. The turning point is assumed to be in the vicinity of $670 (1977 prices), the estimate contained in ACC. [1/] To evaluate the Kuznets Curve hypothesis, one has to look at per capita income levels of the countries in question during the periods over which the time trends in income distribution were observed. For countries with relatively low incomes over the period in question, income distribution should have worsened with growth. Only in El Salvador did this clearly occur. In other low-income countries, income distribution improved (Sri Lanka, Pakistan) or remained unchanged (Peru) with growth; evidence on income distribution was mixed (India, Philippines);[2/]

1/ ACC op. cit., p. 307. The authors note that $600 in 1975 prices (equivalent to $670 in 1977 prices) is the turning point for the share of the lowest 60, and that the shares of lower groups turn at successively higher levels of GNP.

2/ For India, Fields reports a probable decline in inequality, while the ACC data show a fall in the share of income of the lowest 60 percent. For the Philippines, Fields reports that the Gini coefficient was unchanged, but that the ratio of income shares of the top quintile to the bottom quintile rose. On this basis, he judges distribution to have worsened. ACC find the share of the lowest 60 percent essentially unchanged, a result that is not inconsistent with Fields, but which does conflict with the declining share predicted by the Kuznets Curve.

Table VI

Growth and Changes in Income Distribution Over Time

Country	Period Covered	Per Capita Income [c/] Initial (1977 Prices)	Final (1977 Prices)	Growth Rate	Expected Trend in Inequality From Kuznets Curve [a/]	Actual Change in Inequality Fields	Actual Change in Inequality ACC
Sri Lanka	1953-73	n/a	156	1.8 [b/]	Increase	Decrease	-
Sri Lanka	1963-73	124	156	2.3	Increase	-	Decrease
Costa Rica	1961-71	827	1103	3.3	Decrease	Decrease	Decrease
Turkey	1963-73	652	942	3.8	Decrease	-	Decrease
Colombia	1964-74	519	714	3.3	Uncertain	-	Decrease
Taiwan	1950s-70s	n/a	n/a	5.3 [b/]	Uncertain	Decrease	-
Pakistan	1963/4-69/70	145	188	4.5	Increase	Decrease	-
Singapore	1966-75	1176	2514	8.8	Decrease	Decrease	-
India	1960/61-68/69	125	137	1.2	Increase	Decrease	-
Taiwan	1964-74	524	1012	6.8	Uncertain	-	Decrease (small)
Yugoslavia	1963-73	1024	1702	5.2	Decrease	-	Unchanged
Peru	1961-71	483	676	3.4	Increase	-	Unchanged
Philippines	1961-71	302	369	2.0	Increase	Increase	Unchanged
Korea	1965-76	399	901	7.7	Uncertain	-	Increase (small)
India	1954-64	n/a	138	1.8 [b/]	Increase	-	Increase
Bangladesh	1963/64-73/74	82	72	-1.5	Decrease	Increase	-
Argentina	1953-61	n/a	1305	1.4 [b/]	Decrease	Increase	-
Brazil	1960-70	667	903	3.1	Decrease	Increase	Increase
Mexico	1963-75	842	1216	3.1	Decrease	Increase	Increase
El Salvador	1945-61	n/a	420	1.6 [b/]	Increase	Increase	-
Puerto Rico	1953-63	n/a	1674	n/a [b/]	Decrease	Increase	-

a/ Expected trend is based on a turning point in the vicinity of $670, at 1977 prices.

b/ Growth rate based on estimates for 1950-60 and 60-70 contained in Morawetz, Twenty-five Years Of Economic Development, 1950 to 1975, IBRD, 1977. The growth rate for Puerto Rico is assumed positive, but less than 9.5 percent.

c/ Figures for GNP per capita are from World Bank Tables, December 1979. Growth rates are based on a comparison of initial and final year GNP per capita.

or else growth did not take place (Bangladesh, where per capita income declined). In high-income countries, income distribution should have improved with growth. This occurred in three cases (Costa Rica, Singapore, and Turkey). In other cases income distribution worsened (Brazil, Mexico, Argentina, Puerto Rico) or was substantially unchanged (Yugoslavia). Finally, there were three countries (Korea, Taiwan, Colombia) that moved from the low-income side of the curve to the high income side. The Kuznets curve hypothesis does not predict changes in income distribution for such cases, without more detailed quantitative specification. In fact, income distribution improved in Colombia and did not change significantly in Korea and Taiwan.

In sum, the experiences of only four countries (Costa Rica, Singapore, Turkey, and El Salvador) provide examples that clearly conform with the Kuznets Curve. Of these, inequality increased only in El Salvador. The Philippines and India provide mixed evidence. Seven countries (Sri Lanka, Pakistan, Bangladesh, Brazil, Mexico, Argentina and Puerto Rico) provide strong counter-examples, and in two others (Yugoslavia and Peru) there was no change in inequality despite expectations. For Korea, Taiwan and Colombia expectations were uncertain.

More positively, these findings warrant cautious optimism about the effects of trends in income distribution on the scope for alleviation of poverty. LDC poverty is heavily concentrated in Asia, and secondarily in Africa. Of the five countries in which experience has been clearly one of positive growth and

significant increases in inequality, all are in Latin America and only one (El Salvador) would have fallen in the low-income group by 1977 standards. In contrast, the performance of the Asian countries is at worst ambiguous or fairly neutral (Bangladesh, India, the Philippines, and Korea) and in other cases positive (Sri Lanka, Pakistan, Taiwan, and Singapore). Further, for the low-income countries in this group (India, Pakistan, Sri Lanka, Bangladesh) as well as for Indonesia, the estimated share of the lowest 40 percent is relatively high (Table I). Unfortunately, the data for African countries are too scant to provide much information.

While evidence on the relationship between growth and income distribution is somewhat ambiguous, the evidence on growth and poverty alleviation is more clear-cut. For virtually the same sample (with Thailand substituted for El Salvador), Fields finds ten cases where the incidence of poverty fell, and only three examples where poverty increased -- India, Argentina and the Philippines. 1/ Insofar as average annual growth rates of per capita income were fairly low for India and Argentina for the periods in question (1.2 percent and 1.4 percent, respectively), this hardly constitutes a failure of rapid growth. 2/

1/ Fields, op. cit., p. 15.

2/ Despite negative growth and worsening income distribution, Fields reports that the evidence on Bangladesh is mixed, and judges poverty to have fallen. In the Philippines, which grew at 2 percent, the conclusion that poverty rose is based on a decline in the average annual income among the poorest quintile.

Furthermore, a number of simulation studies that incorporate the assumption that income distribution will follow the path described by the Kuznets Curve indicate that the incidence of poverty nonetheless declines substantially as per capita GNP increases. The preliminary results of a simulation study by Ahluwalia and Duloy indicate that for a country initially at an income level of $100 (1970 prices), the incidence of poverty would decline from 72 to 45 percent over a twenty-year period if an average annual growth rate for per capita income of 3 percent could be maintained, despite an assumed worsening of income distribution. 1/

Projections reported by Ahluwalia, Carter and Chenery assume a 2.6 percent growth rate in real per capita GNP for low-income countries, and changes in income distribution that follow the Kuznets Curve. Over the 1975-2000 period, these assumptions would generate a decline in the incidence of poverty in low-income countries from 51 to 22 percent. Increasing the assumed growth rate to 3.6 percent would result in a greater decline in the incidence of poverty in low-income countries, to around 14 percent by the year 2000. 2/

The discussion so far has dealt with poverty alleviation, where poverty has been considered in terms of levels of income.

1/ M.S. Ahluwalia and J.H. Duloy, "Poverty Alleviation and Growth Pessimism: A Re-examination of Cross Country Evidence," Development Research Center, IBRD (Draft), April 1977.

2/ Ahluwalia, Carter and Chenery, op. cit., pp. 318 and 328.

The evidence points to a significant impact of growth on the incidence of poverty in low-income countries, even if income distribution worsens along the lines described by Ahluwalia's empirical estimates of the Kuznets Curve. An important question is whether a similar relationship holds for indicators of basic needs satisfaction other than the incidence of poverty. Results of econometric work by Leipziger and Lewis indicate that for low-income countries, social indicators such as literacy, life expectancy, infant mortality and first level school enrollments are significantly correlated with per capita income levels whereas the correlations of these indicators with Gini coefficients are statistically insignificant. 1/ For middle-income countries (defined using the 1975 IDA-eligibility criterion) the opposite set of results emerges: significant correlations of social indicators with Gini coefficents but not with per capita income levels. Their findings tend to support the proposition that growth in per capita income is of primary importance in achieving increased satisfaction of basic needs in low-income countries.

None of this is to deny the importance of the pattern of growth in terms of the distribution of increases in income and the composition of changes in output. The econometric results presented earlier (p. 22) indicate that for low-income countries, variations in the share of the lowest 40 percent of income recipients can have powerful effects on the incidence of poverty

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1/ D.M. Leipziger and M.A. Lewis, "Social Indicators, Growth and Distribution," World Development, Vol. 8, No. 4, 1980.

associated with a given income level. The key point is that if rapid growth can be achieved in low-income countries, the effects in terms of poverty alleviation are likely to be substantial and positive, even with some worsening of the income distribution. If that worsening can be avoided -- past experience suggests that it can -- so much the better.

III. The Distribution of Official Development Assistance Among Countries

A. The Current Distribution

This section examines the distribution of Official Development Assistance (ODA) among recipients. ODA is defined by the Development Assistance Committee of the OECD as grants or loans that are undertaken by the public sector (including multilateral agencies as well as bilateral donors); that have promotion of economic development and welfare as main objectives; and that are offered at concessional terms (if a loan, at least 25 percent grant element).[1/]

This concessional assistance comprises only a portion of total resource flows to developing countries. For instance, in 1976 ODA accounted for about 30 percent of total disbursements of medium- and long-term capital to developing countries.[2/] In particular, for the World Bank Group, lending by IDA ($2.86 billion in 1978) was counted as ODA, while IBRD lending ($6.55 billion) was not. Overall for multilateral agencies, grants amounted to $2.5 billion; concessional loans came to $4.8 billion, and non-concessional lending totaled $9.88 billion in 1978.[3/]

1/ Development Cooperation 1979, Organization for Economic Cooperation and Development, Paris, November 1979, p. 209. The "grant element" reflects the extent to which the financial terms of the loan -- the interest rate, maturity, and grace period -- are more concessional than the terms of a commercial loan.

2/ World Development Report 1979, p. 9.

3/ Development Cooperation 1979, Table C.4. These data are on a commitments basis.

The data presented here represent average annual commitments of ODA during the 1976-78 period from all sources except centrally planned economies.[1/] More specifically, the data include commitments by multilateral institutions, members of the Development Assistance Committee, and countries belonging to OPEC. The data have been collected for 102 recipients, that each received at least $75 million in ODA commitments over the three-year period. The countries collectively accounted on average for over $25 billion per year, nearly 90 percent of total ODA commitments reported by the DAC.

Figures for individual countries are reported in the Annex Table. For the same groups of countries discussed earlier, Table VII compares the distribution of poverty and the distribution of ODA.

Table VII

The Distribution of Poverty and Official Development Assistance

Country Group	Percent of Total Poor	Cumulative Percentage of Poor	ODA Commitments ($ mill)	Percent of Total ODA	Cumulative Percentage of Total
(1977 Per Capita GNP)					
Less than $150	17.4	17.4	3,385	13.3	13.3
India - $150	37.2	54.6	2,100	8.3	21.6
$150 - $300	26.1	80.7	5 793	22.8	44.4
$301 - $450	9.8	90.5	4,979	19.6	64.0
$451 - $1,200	6.2	96.7	5,541	21.8	85.8
$1,200 - $4,800	3.2	99.9	3,605	14.2	100.0
Total	99.9		25,403	100.0	100.0

SOURCE Annex Table and Table II

1/ Development Cooperation 1979, Table D.4

The data presented in Table VII indicate that the distribution of concessional assistance among countries does not reflect the distribution of poverty. The group that accounts for 80 percent of the developing world's poor receives only 44 percent of concessional assistance, while countries accounting for less than 10 percent of the poor receive 36 percent of concessional assistance. India alone accounts for a great deal of the disparity between the distribution of poverty and the distribution of ODA.

B. Explaining the Allocation Pattern

A number of studies in recent years have sought to explain allocation patterns of development assistance. Paul Isenman investigated flows of development assistance during the late 1960s and early 1970s from a variety of sources: USAID, DAC members as a group, the IBRD, IDA and the UN Development Programme.[1/] His results strongly confirmed two "biases" in aid allocations: a middle-income bias revealed in the tendency for per capita assistance to rise as per capita income increases to a level of $400 (1970 prices, equivalent to a per capita income of about $650 in 1977 prices) and then to fall; and a country-size bias reflected in the tendency for per capita assistance to fall, the larger the population size of the recipient. Edelman and Chenery used

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1/ See Paul Isenman, "The Middle-Income and Country-Size Biases in Aid Allocations," IDS Communication 115, Institute of Development Studies, Sussex, July 1975; and "Biases in Aid Allocations Against Poorer and Larger Countries," World Development, Vol. 4, No. 8, 1976.

aggregate data on commitments of "Official Concessional Assistance" (i.e., ODA plus multilateral loan commitments that are not sufficiently concessional to qualify as ODA) from DAC bilateral sources, multilateral sources, and OPEC.[1/] They analyzed a considerably larger sample of countries (89) than the samples investigated by Isenman, which for the most part ranged from 20 to 41 countries. Their tests covered three successive time periods (1967-69; 70-72; and 73-74) and confirmed both the country-size and middle-income biases for each period, although the middle-income bias for the 1970-72 period was not statistically significant. Dudley and Montmarquette tested 1970 commitments from various bilateral donors, according to a supply-side model of bilateral aid for each donor that included considerations of population, per capita income, political ties to the donor in question, economic ties to that donor and bandwagon effects -- the tendency for a donor to give more aid to countries receiving substantial amounts of aid from other sources.[2/] Their results indicated an insignificant role for population size in influencing aid allocations of most donors once political, economic and bandwagon factors were

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1/ John Edelman and Hollis Chenery, "Aid and Income Distribution," in The New International Economic Order: The North-South Debate, Jagdish N. Bhagwati, Ed., MIT Press, 1977.

2/ L. Dudley and C. Montmarquette, "A Model of the Supply of Bilateral Foreign Aid," American Economic Review, Vol. 66, No. 1, March 1976.

taken into account. However, both the bandwagon variables (other donor assistance) and the economic ties variables (the previous year's exports from the donor in question to the recipient in question, divided by recipient population) may be proxies for the small-country bias rather than vice-versa. If all donors have a small-country bias, then the bandwagon variable will reflect and incorporate that bias. Similarly, insofar as most bilateral assistance has been tied to purchases in the donor country, the exports variable could simply represent the effects of country-size bias in allocations of previous years. Political variables surely help account for the small-country bias. However, these were included in several of Isenman's tests, without negating the existence of a bias against large countries.

Are the middle-income and country-size biases reflected in more recent allocations of assistance? One might expect that the increasing concern of donors with poverty alleviation and basic needs, combined with the critical evaluation of allocation patterns contained in a number of papers including those cited here, would result in a reduction of these biases. To gain some perspective on this question, the following equation was tested for the entire sample of countries in the Annex Table.

$$\text{(3)}\quad \text{Log PCA} = 10.38 - .73\ \text{Log Pop} - 1.89\ \text{Log PCY} + .147\ (\text{Log PCY})^2$$
$$(3.2)\quad (13.0)\quad (-1.8)\quad (1.8)\quad R^2=.69$$

The explanatory power of the equation is fairly high. The population coefficient is clearly significant and evidences a very strong bias against large countries; interpreting the coefficient as an elasticity, assistance in per capita terms (PCA) tends to fall by 73 percent as population size doubles. The per capita income coefficients (based on 1977 GNP per capita) are each marginally significant. They indicate a reversal of the middle-income bias, i.e., a tendency for per capita assistance to fall as per capita income increases to about $620 and then to rise. Since low-income LDCs are on average more populous, the bias against large countries accounts for much of the concentration of assistance in middle- and high-income LDCs.

Before concluding that the behavior of donors with respect to the middle-income bias has changed, several factors need to be mentioned that make it difficult to compare these results with those of Chenery and Edelman, and Isenman. The former included loans from multilateral banks (particularly IBRD lending) that were not sufficiently concessional to qualify as ODA. At the same time, the authors emphasize that most of these funds go to middle-income countries and the scope for reallocation of such lending to low-income countries is extremely limited because of debt-servicing considerations. Including sources of funds directed primarily to middle-income countries would obviously alter the regression results. Since we are concerned with assistance that might

hypothetically be reallocated to low-income countries, it seems sensible to exclude the harder loans of the multilateral banks. Secondly, our sample of countries excludes those that receive small amounts of ODA, and includes a number of very small, high-income recipients of ODA not included in either of the other two studies. The argument for inclusion is that these countries receive significant amounts of ODA in absolute terms,[1/] so that a discussion of the scope for reallocating ODA should take them into account. Again, it is clear that excluding these countries would affect the results.

While the equations tested omit political variables, it is obvious that these play an important role in the allocation pattern. For instance, the four largest deviations of actual from predicted allocation levels are accounted for by Egypt, Israel, Jordan, and Syria, which together claimed over $6 billion in annual ODA commitments, almost 25 percent of the total. The presence of other major political influences can be readily discerned from the per capita ODA figures contained in the Annex Table.

1/ For instance, French Guiana, Guadalupe, Martinique, Reunion and French Polynesia together receive $1.25 billion of ODA annually, but have an aggregate population of less than 1.5 million.

C. Mechanisms for Changing the Allocation Pattern

Positive questions about what factors determine or explain assistance allocations lead naturally to normative questions about what factors ought to determine allocation patterns, and in what direction. Both Isenman and Chenery and Edelman argue that the country-size bias ought to be softened if not eliminated, and the bias towards middle-income countries ought to be converted to one towards low-income countries. Several allocation models have been developed, aimed at explicitly addressing these biases.

Cline and Sargen propose an aid allocation model that determines allocations of development assistance according to need and performance criteria.[1/] Their approach starts, as most donors would, with a specified amount of assistance and a list of potential recipients. They then seek a linear path such that per capita assistance declines as per capita income increases. Thus they incorporate an explicit bias in favor of low-income countries, and remove any bias based on population size. By stipulating a ceiling level of per capita income at which assistance falls to zero, they can determine a unique linear relationship between per capita income and per capita assistance that just exhausts the amount of assistance available.

1/ William R. Cline and Nicholas P. Sargen, "Performance Criteria and Multilateral Aid Allocation," World Development, Vol. 3, No. 6, June 1975.

The next step is to incorporate performance criteria, that are used to adjust in either direction the allocations determined by need criteria alone. The factors that are taken into account in performance include savings, export growth, inflation, tax revenues, and efficiency in resource use as measured by an incremental capital output ratio. Two of these indicators -- savings and tax revenues -- are measured in terms of deviations from expected performance as predicted by per capita income. Thus, a low-income country's savings performance would be evaluated relative to the savings rate expected of a low-income country, rather than in comparison to savings performance of middle-income countries.[1/] Each indicator is normalized by dividing by the respective standard deviation. For each country the five indicators are aggregated into a single composite performance indicator, using an arbitrary weighting scheme. This indicator is then used to adjust per capita allocations upward or downward according to whether performance has been above or below average.

1/ One could argue that this procedure should also be applied to the efficiency variable since in low-income countries infrastructure may claim a larger share of investment, with a gestation lag significantly longer than the two-year lag assumed by Cline and Sargen. The capacity for sustained export growth may also vary with the level of development.

A broadly similar allocation model, following the work of Isenman, has been developed and used at AID to help determine indicative medium-term planning levels for development assistance, according to broad need and performance criteria.[2/] The model assigns a weight, W_i, to each recipient country according to population, per capita income, and performance, i.e.,

$$W_i = (Pop_i)^a \ (PCI_i)^b \ (Perf_i)^c$$

The weights are summed and each country's share of total assistance is determined by its weight relative to the total. The ratio of one country's allocation to another's will reflect the ratio of the two weights, which in turn will depend on relative population size, per capita income and performance.[2/] The exponents are determined according to policy judgements about the importance that each variable should have in determining the allocations. The exponent attached to the population variable allows more or less bias with respect to country size, depending on how close the value

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1/ Michael Crosswell, "Basic Human Needs and the Distribution of Development Assistance Among Countries: The Indicative Planning Allocation Procedure," AID Mimeo, August 1979.

2/ In particular, the ratio of assistance levels for any two countries will be expressed by:

$$A_i = \left(\frac{Pop_i}{Pop_j}\right)^a \left(\frac{PCI_i}{PCI_j}\right)^b \left(\frac{Perf_i}{Perf_j}\right)^c$$

chosen is to 1.0 -- the value at which there is no bias. The value of the exponent associated with per capita income is typically negative, so that assistance tends to decline as per capita income increases. The exponent on performance, along with the scale chosen for the performance variable, determines the importance of performance considerations in affecting the indicative allocations. The allocations are determined subject to two general constraints that specify the minimum and maximum levels of assistance that may be allocated to countries.

There are policy issues surrounding each of the variables.[1/] One question is whether the population variable ought to reflect total population or poor population, the number of people below a poverty line. The allocation model described above has been developed in a framework in which increased satisfaction of basic needs is taken as the primary objective of development assistance, and need for outside assistance is an explicit allocation criterion. This might suggest that need for assistance should be considered in terms of the extent of poverty (roughly measured by the number of poor people or the incidence of poverty) compared with domestic resource availability (as indicated by per capita income). However, each country faces the task of achieving the satis-

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1/ This paragraph is based on the analysis contained in "Need As a Criterion for Allocating Development Assistance," Michael Crosswell, AID (Mimeo), July 1980.

faction of basic needs of all its inhabitants. Therefore, both the scope of the problem and domestic resource availability depend on the number and income of the nonpoor. Considered in this light, it can be shown that total population is the more appropriate population variable. Domestic resource availability would be ideally measured not by per capita income alone, but rather by the ratio of per capita income to the poverty line, defined as the average per person cost of a standard of living that meets basic needs.[1/] This ratio would indicate need in terms of the margin by which per capita income exceeds the income required to meet basic needs. In practice, the Kravis factors described in the first section provide an approximation to this adjustment to the extent that differences in poverty lines among countries reflect differences in purchasing power.[2/]

The performance variable pertains not simply to aggregate growth but to other factors that are also related to poverty alleviation and increased satisfaction of basic needs. For

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1/ A formal derivation of this argument is presented in the paper just cited.

2/ Recall footnote 2 on page 41, which shows that the relative assistance levels of two countries depend on the ratio of their per capita incomes. Suppose these are expressed in dollars of equivalent purchasing power. If poverty lines expressed in ICP dollars are the same for each country, then the ratio will not change as each per capita income figure is divided by the same poverty line.

instance, performance with respect to literacy, infant mortality, life expectancy, and so on are important, as are other criteria having to do with income distribution.[1/] Cline and Sargen argue that this unduly penalizes poor people in countries with an unfavorable orientation toward equity and poverty alleviation. However, assistance is likely to be less effective in such countries in enhancing satisfaction of basic needs. Further, there may be some value to reinforcing good performance at the expense of poor performance in the distributional area.

D. Effectiveness Considerations and the Allocation Pattern of ODA

The discussion so far has pointed to the high concentration of the LDC poverty problem in low-income countries (those below a 1977 per capita income level of $300) at the same time that the major share of concessional foreign assistance is directed toward middle-income countries. This allocation pattern reflects *inter alia* a bias against populous countries, and a bias in favor of higher income countries. A basic argument of this paper is that if the problem of alleviating global poverty over the next several decades is of major concern to donors, then concessional assistance should be reallocated towards the group of countries that represents the bulk of the global poverty problem -- the low-income countries.

1/ As with savings, actual performance is evaluated in terms of expected performance at various income levels.

One critical response accepts the premise that global poverty is of major concern, but contends that the current ODA allocation pattern is rational, because assistance can be used more effectively to address poverty in middle-income countries than in low-income countries. Thus, the current allocation pattern arguably maximizes the impact of foreign assistance on LDC poverty, by concentrating assistance on countries that may have fewer poor people, but which use assistance more effectively to alleviate poverty. This can be considered both as a positive statement about the determinants of current allocation patterns, and a normative statement about how assistance ought to be allocated.

Whether such effectiveness considerations play a major role in current assistance allocations is difficult to test empirically, insofar as proxy variables for effective use of assistance are hard to come by. To a large degree, the performance indicators discussed above are designed to identify countries where resources are likely to be used effectively. One question is whether such indicators help explain allocation patterns of donors. Cline/Sargen tested both per capita income and their composite performance variable and concluded that "/MDB/ lending shows only a weak relationship to country performance. Its relationship to the composite indicator is positive but insignificant in

the basic model.... More surprisingly, per capita income shows no influence on aid allocation."[1/] Their tests did not include population as an explanatory variable. Perhaps more to the point is the question whether their performance measure varies systematically with per capita income (positively) or with population size (negatively), since both of these contribute to the relative concentration of assistance in middle-income countries. If so, then there would be obvious conflicts between need criteria (which would reorient assistance to the low-income group) and performance/effectiveness criteria. In fact, there is no statistically significant relationship between the Cline/Sargen performance measure on the one hand, and contemporaneous levels of population and/or per capita income on the other.[2/]

Tests of the non-linear allocation model discussed above (pp. 41-44), using internal AID appraisals of country performance, reveal that these performance considerations have played a statistically significant but quantitatively small role in influencing past allocations of AID's Development Assistance. The same tests indicate significant and major

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1/ Cline and Sargen, op. cit., p. 389

2/ For per capita income, this partially reflects the fact that two of the five elements of the performance variable -- those pertaining to domestic savings and tex revenues -- were measured taking the effects of per capita income into account. See page 40.

biases against populous countries and against low-income countries. Again, the performance variable was not strongly correlated either with population size or with per capita income.1/

Finally, the data presented in the Annex Table identify countries and per capita ODA commitments. Casual perusal of these data suggests that political factors and population size can account for most instances of extremely high and extremely low levels of ODA per capita. Furthermore, the twenty-two countries that received less than ten dollars per person in ODA commitments include countries such as Korea, Taiwan, Malaysia, Brazil, Colombia, Thailand and Philippines -- countries which would probably rank fairly high as effective users of resources.

At the conceptual level, the issue is whether there is good reason to expect that assistance can be used more effectively to address poverty in middle-income (or small) countries than in low-income (or large) countries. This depends in part on how one defines effectiveness. The following discussion sketches in a rough fashion some of the relevant arguments.

Middle-income countries are frequently characterized by a number of features that contribute to effectiveness in a

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1/ Details available from the author.

general sense.[1/] For instance they usually have better infrastructure, greater administrative capability, more advanced institutions, and healthier, better educated populations. In short, they are by and large more developed, and one of the hallmarks of development is that resources in general are employed more effectively.

Thus, one might expect larger absolute increases in income and output from a given amount of assistance in middle-income countries. However, this does not necessarily imply that assistance is more effective in middle-income countries. First, consider effectiveness simply in terms of economic growth. For two countries with equal populations, similarly favorable policies, but different per capita income levels (say $150 and $600) a given amount of foreign assistance will represent a much larger portion of GDP, domestic savings, and domestic investment in the low-income country, not only because per capita income is lower, but also because savings rates are lower and access to non-concessional foreign resources is more limited. Increases in output associated with such assistance may be smaller in absolute terms (for reasons having to do with the factors mentioned earlier) but much larger in relation to current income levels and to prospective increases in income without such assistance. In other words the same amount of assistance arguably makes a

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1/ These generalizations are less applicable to countries which reached middle-income status on the strength of recent rapid gains in oil exports, or other sudden, external developments.

bigger difference (and hence is more effective) in the low-income country.[1/]

Second (and more to the point) even if absolute increases in income and output are smaller in low-income countries, the effects on poverty may be greater. Assume that the two countries mentioned above have similar income distributions.[2/] Then if the benefits of assistance are distributed in proportion to income, the impact on the poor is likely to be much more widespread and substantial in the low-income country (where the incidence of poverty is around 50-60 percent and a larger share of total income accrues to the poor) than in the middle-income country (where the incidence of poverty is about half as great). The better strategy in the middle-income country might be to try to target assistance on the group that is poor -- the lowest 20 or 30 percent of income recipients. However, such targeting can substantially increase the costs of programming assistance, to the detriment of effectiveness considerations. Also, there is good reason to think that as the incidence of poverty falls, diminishing returns set in, so that further gains in poverty alleviation are increasingly expensive.

1/ The next section discusses the relatively dim growth prospects of low-income countries.

2/ In view of the earlier discussion of the Kuznets Curve, this is not unreasonable.

Finally, effectiveness can be evaluated not only according to the absolute impact on poverty, but also in terms of the value placed on such impacts. There are a number of reasons why a given absolute reduction in poverty may be valued more in low-income countries -- where domestic resources are comparatively scarce, poverty is more widespread, and prospects for growth and poverty alleviation are relatively bleak -- than in middle-income LDCs.[1/] Accordingly assistance could be judged more effective in low-income countries, even if the tangible impact on poverty were smaller.

These considerations suggest that the effectiveness of foreign assistance in alleviating poverty is not necessarily a positive function of per capita income. A second question is whether population size has an important bearing on effectiveness of assistance, in the sense that the same absolute amount of assistance (say $400 million) will have a smaller impact on poverty in a single country of forty million people than divided among four countries of ten million each. There does not seem to be much basis for arguing that a given level of assistance per capita is more effective in small countries than in large ones, and analyses of the

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1/ This argument is analogous to the approach set forth by Chenery and Ahluwalia, in which changes in income within a country would be weighted differentially, according to the income group whose income increases. See Redistribution With Growth, Chapter 2.

small country bias in assistance allocations do not generally dwell on this issue. Instead, it is usually pointed out that a given absolute level of assistance goes further in a small country, and that for various political reasons, donors are concerned with countries as well as people. Thus, in the examples cited above, reducing the number of poor from 5 to 4 million in each of the four small countries would probably be preferred to a reduction from 20 to 15 million in the large country, despite the larger impact in the latter case. The problem, of course, is that global poverty is heavily concentrated not merely in low-income countries, but also in populous countries. Thus, four countries account for nearly 60 percent of the total number of poor, while over three-quarters of the poor are in eleven countries, all with total populations above thirty million.[1/] A significant bias in assistance allocations against populous countries is one which affects the vast majority of the world's poor. Such a bias is extremely counterproductive if the objective is one of making substantial progress in alleviation of world poverty over the next several decades.

1/ Based on figures in the Annex Table for population and incidence of poverty.

IV. Foreign Assistance and Growth

The previous sections of this paper have established that LDC poverty is heavily concentrated in low-income countries, and that the persistence of widespread poverty in this group of countries cannot reasonably be attributed to a failure of trickle-down mechanisms, since growth in per capita income has been extremely slow. More positively, evidence from a variety of sources suggests that rapid growth in low-income countries would have a substantial positive impact in terms of poverty alleviation. However, although the LDC poverty problem is heavily concentrated in low-income countries, and although donors have expressed grave concern about the failure of growth in LDCs as a group to have a major impact on LDC poverty, the bulk of concessional foreign assistance (not to mention non-concessional assistance) goes to middle-income countries. Given a major concern on the part of donors with alleviating LDC poverty on a sustainable basis, there is a strong argument for increasing concessional assistance to low-income countries *if* such assistance would be effective in accelerating growth. This depends crucially on policies in the recipient countries. This section of the paper reviews evidence on the past and prospective effectiveness of foreign assistance in promoting growth in LDCs.

A. Empirical Evidence

The main evidence against the argument that increased assistance accelerates growth rates on the finding that foreign

capital inflows and domestic savings rates are inversely correlated. Weisskopf estimated that "approximately 23 percent of net foreign capital inflow substitutes for domestic savings," and regards that figure as a lower bound.[1/] Griffin and Enos estimated that an extra dollar of aid would increase investment by only $.25.[2/] Other authors have found similar negative correlations.

Papanek provides a review and criticism of this literature that accepts the observed negative correlation between foreign inflows and domestic savings, but sets forth several arguments against a conclusion that foreign assistance causes savings efforts to decline.[3/] One argument is that some foreign assistance is explicitly directed towards activities commonly classified as consumption -- emergency food aid; military assistance; recurrent cost financing of some government services such as health, education and agricultural inputs; and so forth. Such assistance will lead to an increase in imports (other things equal) and a decline in recorded domestic savings, the difference between gross investment and

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1/ T. Weisskopf, "The Impact of Foreign Capital Inflow On Domestic Savings in Underdeveloped Countries," Journal of International Economics, Vol. 2, No. 1, 1972, p. 37

2/ C.B. Griffin and J.L. Enos, "Foreign Assistance: Objectives and Consequences," Economic Development and Cultural Change, Vol. 18, No. 3, April 1970, p. 321.

3/ G.F. Papanek, "The Effect of Aid and Other Resource Transfers on Savings and Growth in Less Developed Countries," The Economic Journal, Vol. 82, No. 327, 1972.

the current account deficit. Yet insofar as it is provided as a grant, it has no bearing on domestic savings effort.[1/] A second argument rests on the tendency for assistance to rise in times of crisis caused by exogenous factors such as war, weather, or adverse movements in the terms of trade. In these situations, savings are likely to fall more sharply than income. This would produce an observed negative relationship between foreign assistance and savings rates, again without reflecting causality from increased aid to diminished savings effort. Similarly, oil exporters such as Venezuela, Nigeria, and Indonesia are able to generate a large proportion of development expenditures from oil exports and therefore are judged to have less need for foreign assistance. Papanek concludes that "As long as both savings and inflows are substantially affected by third factors, the negative correlation between the two found in many studies sheds little or no light on their causal relationship."[2/]

Even if a dollar of foreign assistance increases investment by somewhat less than a dollar, the effects on growth can nonetheless be positive and substantial. In a subsequent

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1/ If provided as a loan, then the country is financing current consumption through borrowing, i.e., dissaving. Another question, of course, is whether "consumption" in areas of health, education, and nutrition is more properly classified as investment. See the World Development Report 1980 and sources cited therein for an extensive discussion of this issue.

2/ Papanek, op. cit., p. 950.

paper, Papanek tests the effects of domestic savings, foreign assistance, private foreign investment, and other foreign flows -- all measured as ratios to GDP -- on growth of GDP.[1/] The samples tested include a group of thirty-one Asian countries, and a larger group of eighty-five developing countries. His results are reproduced below:

		Savings		Aid		Foreign Investment		Other Flows	R^2
Growth	= 1.5	+ .20	+	.39	+	.17	+	.19	.37
(n=85)	(2.5)	(6.0)		(5.8)		(2.5)		(2.1)	
Growth	= 1.5	+ .21	+	.46	+	.35	+	.13	.46
(n=31)	(1.5)	(5.0)		(4.4)		(1.7)		(0.8)	

(T values in parentheses)

The various sources of investment collectively explain a substantial portion of observed growth performance. Particularly noteworthy are the relatively high coefficients for aid, which appears to have a more significant effect on growth than domestic savings or other forms of foreign resource flows. However, the validity of these coefficients depends on whether aid is correlated with other sources of growth not included in the equation, particularly variations in efficiency of resource use. If aid flows disproportionately to countries that make better use of resources, then the

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1/ G.F. Papanek, "Aid, Foreign Private Investment, Savings and Growth In Less-Developed Countries," Journal of Political Economy, Vol. 81, No. 1, 1973, pp. 120-130.

coefficient for aid in Papanek's results is overstated.[1/]

The most prevalent analytical framework for relating flows of foreign assistance to growth in GNP is the two-gap model.[2/] Chenery and Strout used this model to formulate projections of growth and foreign assistance requirements over the 1962-75 period for fifty developing countries. Chenery and Carter provided an interim review of development performance relative to these projections for the period up to 1970. Lewis and Michalopoulos have recently looked at the Chenery/Strout and other projections of performance through 1975. These reviews provide some scattered insights into the contribution of foreign assistance to more rapid growth.[3/]

1/ Michalopoulos and Jay consider export growth a plausible indicator of increased efficiency in resource use, and find a weak positive relationship between export growth and net foreign capital inflow, which they do not disaggregate into public and private components. Inserting export growth into an equation similar to Papanek's results in a decline in the value of the coefficient for foreign capital. See Constantine Michalopoulos and Keith E. Jay, "Growth Of Exports and Income In the Developing World: A Neoclassical View," AID Discussion Paper No. 28, November 1973.

2/ H.B. Chenery and A.M. Strout, "Foreign Assistance and Economic Development," American Economic Review, Vol. 56, No. 4, 1966 and Ronald McKinnon, "Foreign Exchange Constraints in Economic Development," Economic Journal, Vol. 24, No. 124, June 1964.

3/ H. Chenery and N. Carter, "Foreign Assistance and Development Performance 1960-70," American Economic Review, Vol. 63, No. 2, May 1973 and T.L. Lewis and Constantine Michalopoulos, "Developing Countries' Growth: Projections, Performance and Implications for a New International Development Strategy," AID Mimeo, January 1980.

Chenery and Carter note that growth over the sixties was on the whole fairly close to projections. Of thirty-seven countries, twenty-five were within 1.2 percentage points of projected rates, five grew substantially more rapidly and seven grew much more slowly. Overall there was a considerable shortfall in foreign capital inflows as well as a hardening of terms that affected their distribution among countries. On the other hand, export performance was much better than projected. Of five countries for which growth was high absolutely and relative to projections, the foreign capital inflow was of major significance in explaining the surprisingly good performance in Kenya and Thailand; of less significance in Korea; and unimportant in Iran and Taiwan. For thirteen high-growth countries, the foreign capital inflow was about as projected. For eleven "normal-growth" countries and for thirteen low-growth countries, there were substantial shortfalls, on the order of 40 to 70 percent of projections. For the latter group, only four of the thirteen countries received amounts of assistance even close to their projected needs. Naturally, the causality between poor performance and low aid levels can run both ways. However, Chenery and Carter single out India as an important case where shortfalls in foreign assistance severely constrained growth. They argue that, based on India's savings and export performance, aid allocated to India on a basis comparable to other countries would have raised the growth rate from 3.5 to 5.8 percent, or

well over a doubling of per capita growth given a population growth rate of 2.1 percent.

The review by Lewis and Michalopoulos for the 1960-75 period confirms the continuation of the trends highlighted by Chenery and Carter. They provide an analysis by region that compares the foreign capital inflow in 1975 with the level projected by Chenery and Strout. For South Asia, the projections called for $8.1 billion, whereas the actual foreign capital inflow was $2.6 billion. There was a corresponding shortfall in the growth rate of investment over the period (4.6 percent actual versus 7.9 percent projected) and of output (3.8 percent versus 6.1 percent projected). For sub-Saharan Africa the foreign capital inflow in 1975 exceeded the projections ($5.4 billion versus $3.7 billion) but investment growth fell well short (5.8 percent versus 7.3 percent projected). Nonetheless, the GNP growth rate was close to what was projected (4.4 percent versus 4.8 percent projected). Insofar as large amounts of aid were used in Africa for relief of drought and famine during the first half of the 1970s, this may explain the low savings and investment growth.

The evidence presented by Chenery and Carter and by Lewis and Michalopoulos on the importance of foreign assistance in achieving accelerated growth is somewhat inconclusive, in part because the experience of various countries and regions was mixed, and in part because there is not a clearly valid metho-

dology for identifying the contribution of increased foreign assistance to accelerated growth, or the lack of foreign assistance to slow growth.[1/] For our purposes, the experience of South Asia in general and India in particular is important, insofar as both papers suggest that inavailability of foreign capital severely constrained investment and growth, in the region where the major portion of global poverty is concentrated.

B. Projections

Some insights into the effects of increased ODA flows on growth prospects in low-income countries can be gleaned from a comparison of the base and high scenarios for 1980-90 contained in the World Development Report 1979.[2/] In the base scenario, ODA flows to low-income countries would amount to $5.7 billion (1977 prices) in 1980 and rise to $11.6 billion (1977 prices) by 1990. The growth rate in GDP for low-income countries in this scenario would be 4.9 percent. The "high" scenario assumes more rapid growth of exports, ODA and private capital flows, and also more expensive energy. More rapid annual growth of ODA (6.7 percent compared with 3.6 percent in the base) would raise ODA allocations to low-income countries to $15.6 billion by 1990, about $4 billion

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1/ Perhaps due to disillusion regarding the efficacy of growth in improving welfare, there appears to have been little work on the relation between foreign assistance and growth since the early 1970s.

2/ World Development Report 1979, op. cit., Chapter 2, particularly Tables 8, 9 and 16.

higher than in the base scenario. Flows of private capital in the high scenario would increase at a rate of 6.3 percent, compared with 3.9 percent in the base. However, the share of private loans in the financing of external resource requirements of low-income countries is expected to drop from 23 percent in 1976 to 4 percent in 1985 and 1990, so that the impact of the change in this assumption is apparently quite minor. Finally, merchandise exports of developing countries are to increase at 6.5 percent annually in the base scenario, and 7.5 percent in the high scenario, reflecting mainly more rapid growth of manufactured exports. Insofar as the low-income country share in this trade remains small, and the role of manufactured exports in low-income country exports is small, the effect of this assumption is probably also relatively minor. On the negative side, there are no offsetting factors to dampen the effects of the assumption of moderately higher energy prices. Overall, the main positive effect of the high scenario for low-income countries appears to be that of more rapid growth of ODA flows, an increase between 1980 and 1990 of about $6 billion in the base scenario and $10 billion in the high scenario. The effect on growth would be to raise the growth rate from 4.9 percent in the base scenario to 5.9 percent in the high scenario. With population growth estimated at 2.2 percent over the decade, the difference in per capita GDP growth would be 3.7 versus 2.7 percent. The estimates of the effects of more rapid growth

on the incidence of poverty presented earlier (p. 22) suggests that this would make a substantial difference in the extent of poverty by the year 2000.

C. An Illustrative Scenario

Most discussions of basic needs have stressed the need for sizeable increases in the volume of ODA if substantial progress towards eradication of global poverty is be achieved over the next several decades. For instance, Burki and Voorhoeve estimate that the additional investment costs required to meet basic needs in the low-income countries by the year 2000 would amount to about $12 billion annually in 1975 prices, or approximately $13.5 billion in 1977 prices. Resource requirements in terms of recurrent costs associated with this investment would be even higher. They conclude that "Development assistance would have to...grow at a very rapid real rate, if basic needs were to be met by the year 2000."[1/]

The figures in Table VII (p. 33) suggest that a reorientation of ODA toward low-income countries could result in major increases in the volume of assistance allocated to

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1/ See S.J. Burki and J.J.C. Voorhoeve, "Global Estimates for Meeting Basic Needs: Background Paper," Basic Needs Paper No. 1, IBRD, August 1977. Other discussions of resource requirements for alleviating poverty and meeting basic needs are contained in J.J. Stern "Growth, Redistribution and Resource Use," Development Discussion Paper No. 13, Harvard Institute for International Development, April 1876, and Jan Tinbergen, Reshaping the International Order: A Report to the Club of Rome, E.P. Dutton, New York, 1976.

countries where the bulk of the world's poor are located. For instance, if 80 percent of ODA were allocated to countries that account for 80 percent of the world's poor, the volume of assistance committed to that group would increase from $11.3 billion to $20.3 billion.

This reallocation could be effected through various combinations of the following three measures: imposing an income ceiling on eligibility for ODA, or otherwise reducing the number of middle- and high-income countries that receive ODA; explicitly incorporating a bias in favor of low-income countries; and diminishing or removing the bias against large countries. For instance if the IDA-eligibility criterion (1977 per capita income of $580) were adopted for all allocations of ODA, then over 80 percent of potential recipient populations would be in countries with per capita incomes below $300. Simply removing the bias against large countries, without explicitly allocating in favor of low-income countries, would lead to an allocation of 80 percent of ODA to low-income countries.

What would be the significance of that assistance in economic terms? The total population of the group of countries with per capita incomes at or below $300 is about 1.25 billion, and the (weighted) average per capita GNP of the group is about $170.[1/] Aggregate GNP of the group is, therefore,

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1/ World Development Report 1979, Table 1. This average is calculated on the basis of a slightly different sample that includes Bhutan and exludes Cape Verde, Gambia, the Solomon Islands and Guinea Bissau.

approximately $212 billion, so that $20 billion of assistance would come to almost 10 percent of aggregate GNP. In the same group of countries, gross domestic savings accounts for about 18 percent of per capita income, so that a reorientation of ODA could potentially raise the investment rate to around 28 percent, compared with a current rate of 21 percent.[1/]

For middle-income countries -- those with per capita incomes above $300 -- ODA accounted for roughly 22 percent of net disbursements of medium and long term loans and grants in 1976.[2/] A reorientation of ODA along the lines described above would reduce the share of middle-income countries in total ODA from 56 percent to 20 percent. This reduction in ODA to middle-income countries would, therefore, amount to roughly 14 percent of medium- and long-term loans and grants. Much of this could be made up by expansion of non-ODA lending, at little real cost to donors.

The scenario described above is merely illustrative. The point of the discussion is that the current distribution of ODA does not reflect very well the distribution of global

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1/ The fact that the investment rate is only 3 percentage points above the savings rate reflects several factors. First, net receipts of ODA were about two-thirds the level of commitments in 1977. Secondly, some of the foreign assistance consists of transfers directed towards consumption (e.g., some forms of food aid) and, therefore, does not directly contribute to investment.

2/ World Development Report 1979, p. 9. These figures are not strictly comparable, but do serve to indicate orders of magnitude.

poverty; that there is considerable scope for increasing resource flows to the countries where most of the world's poor are located through a reorientation of ODA; that such a reorientation could be of major significance to this group of countries in macroeconomic terms; and that the negative macroeconomic effects on middle-income countries would be of a relatively small order of magnitude.

A combination of increases in the total volume of ODA and reorientation of ODA toward low-income countries would, of course, soften this negative impact. For instance, the Brandt Commission report recommends an increased level of assistance for countries in "the poverty belts of Africa and Asia" of at least $4 billion per year in real terms for the next two decades.[1/] In 1977 prices, this would amount to about $3.2 billion or one-third of the assistance that might be redistributed.

Postscript

Since the bulk of this paper was written, the World Development Report 1981 has been issued. Prospects for the low-income oil-importing countries -- essentially the low-income countries discussed in this paper with the exclusion of Indonesia, Angola and Zaire -- are quite dim. Over the next decade, the average annual growth rate in per capita income for this group is projected to be somewhere between 0.7

1/ See North-South: A Program for Survival, Report of the Independent Commission on International Development Issues, MIT Press, 1980.

and 1.8 percent. Growth at these rates will result in only very slow progress in reducing the high incidence of poverty in the group of countries that account for most of the world's poor, and quite possibly implies an increase in the absolute numbers of poor. The urgency of international measures to accelerate the flow of concessional assistance to low-income countries, as well as domestic policies to ensure that foreign assistance effectively contributes to their growth, has never been greater. In the absence of such measures, discussions of whether growth does or does not result in substantial reductions of poverty will be purely academic.

Annex Table

Country	Per Capita GNP - 1977 ($) [1]	Population 1977 (millions) [1]	Average Annual ODA - 1976-78 ($ millions, Commitments) [2]	Per Capita ODA ($)	Per Capita Income - 1975 (ICP $)	Percentage of Population in Absolute Poverty
Bangladesh	90	81.22	1,139.1	14.02	200*	64*
Laos	90	3.20	43.0	13.44	213	57
Ethiopia	110	30.24	140.7	4.65	237*	68*
Mali	110	6.13	189.7	30.95	152	62
Nepal	110	13.32	162.1	12.17	243	55
Somalia	110	3.66	251.7	68.77	216	57
Burundi	130	4.16	241.7	57.96	196	58
Chad	130	4.22	119.0	28.20	179	60
Rwanda	130	4.38	141.1	32.21	177	60
Upper Volta	130	5.47	161.9	29.60	181	60
Zaire	130	25.69	341.8	13.30	281*	53*
Cape Verde	130	.31	38.7	124.84	195	59
Burma	140	31.51	254.3	8.07	237*	65*
Malawi	140	5.60	160.8	28.71	232	56
India	150	631.73	2,100.5	3.32	300*	46*
Mozambique	150	9.69	112.2	11.58	421	41
Niger	160	4.86	168.6	34.69	230	56
Vietnam	160	50.65	270.1	5.33	298	50
Afghanistan	190	14.30	174.6	12.21	272	52
Pakistan	190	74.91	1,365.2	18.22	299*	43*
Sierra Leone	190	3.21	39.3	12.24	421	42
Tanzania	190	16.36	596.9	36.49	297*	51*
Benin	200	3.23	90.4	27.99	207	58
Sri Lanka	200	14.10	322.7	22.88	471*	14*
Gambia	200	.55	36.4	66.18	345	47
Guinea	220	4.99	64.0	12.83	232	56
Haiti	230	4.75	110.7	23.30	324	48
Lesotho	240	1.25	66.1	52.88	214	57
Madagascar	240	8.09	120.3	14.87	302	50
Solomon Isles	250	.21	39.1	186.19	599	30
Central African Empire	250	1.87	52.2	27.91	309	50
Kenya	270	14.61	333.8	22.85	413*	55*
Mauritania	270	1.50	197.6	131.73	405	43
Uganda	270	12.05	27.8	2.31	280*	55*
Guinea Bissau	280	.75	56.3	75.07	459	39
Sudan	290	16.92	521.4	30.81	281*	54*
Angola	300	6.58	44.0	6.69	389	44

Country	Per Capital GNP - 1977 ($) [1]	Population 1977 (millions) [1]	Average Annual ODA - 1976-78 ($ millions, Commitments) [2]	Per Capita ODA ($)	Per Capita Income - 1975 (ICP $)	Percentage of Population in Absolute Poverty
Indonesia	300	133.51	889.0	6.66	280*	59*
Togo	300	2.35	94.2	40.09	358	46
Egypt	320	37.80	2,797.3	74.00	561*	20*
Cameroon	340	7.88	232.9	29.56	490	37
Yemen, PDR	340	1.72	135.4	78.72	346	47
Ghana	380	10.63	163.2	15.35	628*	25*
Honduras	410	3.32	126.3	38.04	646	28
Botswana	410	.73	87.5	119.86	749	22
Liberia	420	1.68	64.4	38.33	603	30
Nigeria	420	78.99	42.8	.54	433*	35*
Thailand	420	43.33	260.2	6.01	584*	32*
Senegal	430	5.24	197.9	37.77	550*	35*
Yemen Arab Republic	430	4.98	388.9	78.09	308	50
Philippines	450	44.47	294.4	6.62	469*	33*
Zambia	450	5.13	187.4	36.53	798*	10*
Congo, P.R.	490	1.42	68.3	48.10	656	27
Papua New Guinea	490	2.86	310.8	108.67	746	22
El Salvador	550	4.26	59.1	13.87	770	21
Morocco	550	18.31	310.8	16.97	643*	26*
Guyana	560	.82	68.9	84.02	840	18
Djibouti	580	.30	52.1	173.67	557	33
Swaziland	610	.51	47.5	93.14	749	22
Bolivia	630	5.15	174.7	33.92	554	33
Ivory Coast	690	7.46	126.2	16.92	695*	25*
Jordan	710	2.89	969.8	335.57	716	24
Colombia	720	24.61	140.9	5.72	851*	19*
Paraguay	730	2.81	37.3	13.27	762	22
Ecuador	790	7.32	75.2	10.27	870	17
Guatemala	790	6.44	93.1	14.46	1,128*	10*
Korea, Republic of	820	35.95	300.0	8.34	797*	8*
Nicaragua	830	2.41	58.8	24.40	1,111	8
Dominican Republic	840	4.98	67.0	13.45	1,135	8
Peru	840	16.36	170.1	10.40	1,183*	18*
Tunisia	860	5.90	335.9	56.93	992*	10*
Syria	910	7.84	1,298.3	165.60	764	21
Malaysia	930	12.96	94.8	7.31	1,006*	12*

Annex Table (continued)

Country	Per Capita GNP - 1977 ($) [1/]	Population 1977 (millions) [1/]	Average Annual ODA - 1976-78 ($ millions, Commitments) [2/]	Per Capita ODA ($)	Per Capita Income - 1975 (ICP $)	Percentage of Population in Absolute
Algeria	1,110	17.15	143.0	8.34	809	19
Turkey	1,110	41.95	156.8	3.74	914*	14*
Mexico	1,110	63.32	42.4	.67	1,429*	14*
Jamaica	1,150	2.10	98.2	46.76	1,211	6
Lebanon	N/A	2.94	129.2	43.95	1,205	6
Chile	1,160	10.55	71.4	6.77	798*	11*
Taiwan	1,170	16.79	40.9	2.44	1,075*	5*
Fiji	1,210	.59	35.9	60.85	1,089	9
Panama	1,220	1.77	28.6	16.16	1,440	5**
Costa Rica	1,240	2.06	68.4	33.20	1,346	5**
Brazil	1,360	116.10	157.0	1.35	1,136*	15*
Surinam	1,470	.38	186.4	490.61	2,175	5**
Argentina	1,730	26.04	60.8	2.33	2,094*	5*
Cyprus	1,830	.64	56.8	88.75	1,651	5**
Malta	1,870	.33	38.8	117.60	2,376	5**
Portugal	1,890	9.58	140.2	14.63	1,676	5**
French Guiana	1,980	.06	97.1	1,618.33	1,422	5**
Iran	2,160	34.78	59.2	1.70	1,257*	13*
Oman	2,540	.81	104.2	128.60	1,020	11
Guadalupe	2,560	.32	274.7	858.43	1,728	5**
Netherlands Antilles	2,780	.24	48.0	200.00	2,400	5**
Greece	2,810	9.23	47.0	5.09	2,370	5**
Israel	2,850	3.60	1,085.3	301.47	3,232	5**
Reunion	2,900	.50	487.4	974.8	1,491	5**
Martinique	3,470	.32	321.7	1,005.3	2,238	5**
Bahrain	3,790	.34	102.5	301.47	2,079	5**
Gabon	3,860	.50	49.3	98.00	1,767	5**
New Caledonia	4,470	.15	76.9	512.67	2,939	5**
French Polynesia	4,770	.15	78.7	524.67	3,362	5**

* Data are from Ahluwalia, Chenery and Carter
** Value of 5 percent imposed
1/ World Development Report 1979 and 1979 World Bank Atlas
2/ Development Cooperation 1979, Table D.4

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